IN THE CLAIMS

Please amend claims 1-2, 4-5, 8, 11-13, 16, 19-21, 24, and 27 as indicated below.

1. (Currently Amended) A method for selecting packets, comprising:

pipelining execution of packet selection processes so that execution of each of the packet selection processes occurs at different levels of a scheduling hierarchy, each level of the scheduling hierarchy corresponding to a priority level associated with an egress queue that receives packets, wherein the priority level is determined based on a contracted rate of the egress queue; and

selecting at least two different packets at two different times in response to execution of the packet selection processes.

2. (Currently Amended) The method of claim 1, wherein each of the packet selection processes comprises two or more subprocesses executed at different levels of the scheduling hierarchy to select a packet, where the packet is selected based on an arrival time of the packet at the egress queue and a departure time of a previous packet at the egress queue from the same flow that the packet belongs.

3. (Original) The method of claim 2, wherein pipelining execution of the packet selection processes comprises executing each of the packet selection processes independent of one another.

4. (Currently Amended) A method for selecting packets comprising:

initiating a first packet selection process at a first time slot[[,]];

initiating a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy, each level of the scheduling hierarchy corresponding to a priority level associated with an egress queue that receives packets, wherein the priority level is determined based on a contracted rate of the egress queue;

selecting a first packet at a third time slot in response to the first packet selection process; and

selecting a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot.

5. (Currently Amended) The method of claim 4, wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively, where the first and second packets are selected based on an arrival time of the first and second packets at a corresponding egress queue and a departure time of a previous packet at the corresponding egress queue from a data flow associated with the first and second packets respectively.

6. (Original) The method of claim 5, wherein each of the two or more subprocesses in the first packet selection process and in the second packet selection process is executed in one time slot.

7. (Original) The method of claim 6, wherein each of the two or more subprocesses in the first packet selection process and in the second packet selection process is executed at a different level of the scheduling hierarchy.

8. (Currently Amended) ~~The method of claim 5,~~ A method for selecting packets comprising:

initiating a first packet selection process at a first time slot;

initiating a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy;

selecting a first packet at a third time slot in response to the first packet selection process; and

selecting a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot,

wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively, and

wherein at least one of the subprocesses in the first packet selection process is different from the subprocesses in the second packet selection process.

9. (Original) The method of claim 5, wherein when a subprocess is selected by the first packet selection process, it is locked and cannot be selected by the second packet selection process.

10. (Original) The method of claim 9, wherein the subprocess is selected from one or more subprocesses at a same level of the scheduling hierarchy by sorting the one or more subprocesses at that level based on a selection criteria.

11. (Currently Amended) ~~The method of claim 10,~~ A method for selecting packets comprising:

initiating a first packet selection process at a first time slot;

initiating a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy;

selecting a first packet at a third time slot in response to the first packet selection process; and

selecting a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot,

wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively,

wherein when a subprocess is selected by the first packet selection process, it is locked and cannot be selected by the second packet selection process,

wherein the subprocess is selected from one or more subprocesses at a same level of the scheduling hierarchy by sorting the one or more subprocesses at that level based on a selection criteria, and

wherein the selection criteria is one selected in a group comprising an arrival time and a contracted rate.

12. (Currently Amended) A computer readable medium having stored thereon sequences of instructions which are executable by a system, and which, when executed by the system, cause the system to:

initiate a first packet selection process at a first time slot[[,]];

initiate a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy, each level of the scheduling hierarchy corresponding to a priority level associated with an egress queue that receives packets, wherein the priority level is determined based on a contracted rate of the egress queue;

select a first packet at a third time slot in response to the first packet selection process; and

select a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot.

13. (Currently Amended) The computer readable medium of claim 12, wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively, where the first and second packets are selected based on an arrival time of the first and second packets at a corresponding egress queue and a departure time of a previous packet at the corresponding egress queue from a data flow associated with the first and second packets respectively.

14. (Original) The computer readable medium of claim 13, wherein each of the two or more subprocesses in the first packet selection process and in the second packet selection process is executed in one time slot.

15. (Original) The computer readable medium of claim 14, wherein each of the two or more subprocesses in the first packet selection process and in the second packet selection process is executed at a different level of the scheduling hierarchy.

16. (Currently Amended) ~~The computer readable medium of claim 13,~~ A computer readable medium having stored thereon sequences of instructions which are executable by a system, and which, when executed by the system, cause the system to:

initiate a first packet selection process at a first time slot;

initiate a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy;

select a first packet at a third time slot in response to the first packet selection process; and

select a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot,

wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively, and

wherein at least one of the subprocesses in the first packet selection process is different from the subprocesses in the second packet selection process.

17. (Original) The computer readable medium of claim 13, wherein when a subprocess is selected by the first packet selection process, it is locked and cannot be selected by the second packet selection process.

18. (Original) The computer readable medium of claim 17, wherein the subprocess is selected from one or more subprocesses at a same level of the scheduling hierarchy by sorting the one or more subprocesses at that level based on a selection criteria.

19. (Currently Amended) ~~The computer readable medium of claim 18,~~ A computer readable medium having stored thereon sequences of instructions which are executable by a system, and which, when executed by the system, cause the system to:

initiate a first packet selection process at a first time slot;

initiate a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process

overlaps execution of the first packet selection process at different levels of a scheduling hierarchy;

select a first packet at a third time slot in response to the first packet selection process; and

select a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot,

wherein when a subprocess is selected by the first packet selection process, it is locked and cannot be selected by the second packet selection process,

wherein the subprocess is selected from one or more subprocesses at a same level of the scheduling hierarchy by sorting the one or more subprocesses at that level based on a selection criteria, and

wherein the selection criteria is one selected in a group comprising an arrival time and a contracted rate.

20. (Currently Amended) A system, comprising:

a switch fabric; and

an egress coupled with the switch fabric to[[:]]

initiate a first packet selection process at a first time slot,

initiate a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy, each level of the scheduling hierarchy corresponding to a priority level associated with an egress queue that receives packets, wherein the priority level is determined based on a contracted rate of the

egress queue;

select a first packet at a third time slot in response to the first packet selection process; and

select a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot.

21. (Currently Amended) The system of claim 20, wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively, where the first and second packets are selected based on an arrival time of the first and second packets at a corresponding egress queue and a departure time of a previous packet at the corresponding egress queue from a data flow associated with the first and second packets respectively.

22. (Original) The system of claim 21, wherein each of the two or more subprocesses in the first packet selection process and in the second packet selection process is executed in one time slot.

23. (Original) The system of claim 22, wherein each of the two or more subprocesses in the first packet selection process and in the second packet selection process is executed at a different level of the scheduling hierarchy.

24. (Currently Amended) ~~The system of claim 21,~~ A system, comprising:

a switch fabric; and

an egress coupled with the switch fabric to

initiate a first packet selection process at a first time slot,

initiate a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy,

select a first packet at a third time slot in response to the first packet selection process, and

select a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot,

wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively, and

wherein at least one of the subprocesses in the first packet selection process is different from the subprocesses in the second packet selection process.

25. (Original) The system of claim 21, wherein when a subprocess is selected by the first packet selection process, it is locked and cannot be selected by the second packet selection process.

26. (Original) The system of claim 25, wherein the subprocess is selected from one or more subprocesses at a same level of the scheduling hierarchy by sorting the one or more subprocesses at that level based on a selection criteria.

27. (Currently Amended) ~~The system of claim 26,~~ A system, comprising:

a switch fabric; and

an egress coupled with the switch fabric to

initiate a first packet selection process at a first time slot,

initiate a second packet selection process at a second time slot immediately following the first time slot such that execution of the second packet selection process overlaps execution of the first packet selection process at different levels of a scheduling hierarchy,

select a first packet at a third time slot in response to the first packet selection process, and

select a second packet at a fourth time slot in response to the second packet selection process, the fourth time slot immediately following the third time slot,

wherein each of the first packet selection process and the second packet selection process comprises two or more subprocesses executed to select the first packet and the second packet respectively,

wherein when a subprocess is selected by the first packet selection process, it is locked and cannot be selected by the second packet selection process,

wherein the subprocess is selected from one or more subprocesses at a same level of the scheduling hierarchy by sorting the one or more subprocesses at that level based on a selection criteria, and

wherein the selection criteria is one selected in a group comprising an arrival time and a contracted rate.